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EXAMINER

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**BEFORE THE BOARD OF PATENT APPEALS
AND INTERFERENCES**

Application Number: 10/734,647
Filing Date: December 11, 2003
Appellant(s): HILLIS ET AL.

Dale C. Barr
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed October 28, 2010 appealing from the Office action mailed March 30, 2010.

(1) Real Party in Interest

The examiner has no comment on the statement, or lack of statement, identifying by name the real party in interest in the brief.

(2) Related Appeals and Interferences

The following are the related appeals, interferences, and judicial proceedings known to the examiner which may be related to, directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal:

Pending appeals for co-pending applications 10/734,658 and 10/734,659.

(3) Status of Claims

The following is a list of claims that are rejected and pending in the application:

Claims 1-50

(4) Status of Amendments After Final

The examiner has no comment on the appellant's statement of the status of amendments after final rejection contained in the brief.

(5) Summary of Claimed Subject Matter

The examiner has no comment on the summary of claimed subject matter contained in the brief.

(6) Grounds of Rejection to be Reviewed on Appeal

The examiner has no comment on the appellant's statement of the grounds of rejection to be reviewed on appeal. Every ground of rejection set forth in the Office action from which the appeal is taken (as modified by any advisory actions) is being maintained by the examiner except for the grounds of rejection (if any) listed under the subheading "WITHDRAWN REJECTIONS." New grounds of rejection (if any) are provided under the subheading "NEW GROUNDS OF REJECTION."

(7) Claims Appendix

The examiner has no comment on the copy of the appealed claims contained in the Appendix to the appellant's brief.

(8) Evidence Relied Upon

6,345,028	Jaeger	2-2002
5,938,734	Yao et al.	8-1999
5,926,649	Ma et al.	7-1999

IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, December 2000, IEEE Press, Seventh Edition, pp. 590 and 1198.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claims 26-50 are rejected under 35 U.S.C. 101 because the claimed invention is directed to non-statutory subject matter.

As per claims 26-50, the claims are not limited to tangible embodiments. Based on pages 4 and 19-21 of Applicant's specification, the "system" can be embodied as entirely software, per se, thus lacking hardware necessary to realize the software's functionality. Therefore, the system of claims 26-50 simply represents functional descriptive material and is thus non-statutory subject matter.

Claims 1-6, 12-20-31, and 37-50 are rejected under 35 U.S.C. 103(a) as being unpatentable over Jaeger (U.S. Patent 6,345,028) in view of "IEEE 100: The Authoritative Dictionary of IEEE Standards Terms, Seventh Edition" (hereinafter "IEEE") and Yao et al. (U.S. Patent 5,938,734) (hereinafter "Yao").

As per claim 1, Jaeger discloses a method comprising:
obtaining one or more temporal addresses corresponding to the at least one specific content (col. 5, lines 49-63; Fig. 1); *It should be noted that the "time stamps" are equivalent to the "temporal addresses."*

and selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses, the spatial-to-temporal translated data being from a hardware spatial data storage system (col. 6, lines 49-63; Fig. 2). *It should be noted that the re-ordered audio/video/data*

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tracks/signals being streamed from the RAM buffer are equivalent to the "spatial-to-temporal translated data."

Jaeger does not explicitly disclose receiving a request for at least one specific content.

IEEE discloses disk read I/O transactions are composed of transaction initiations (i.e. requests) (pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to have the record/playback apparatus receive a playback request so that the incremental temporal segments of each recorded track are read from the disk in response to the playback request. The motivation for doing so would have been to prevent playback at times when the disk drive and/or RAM buffer are not ready to handle the reading and/or writing of data frames.

The combination of Jaeger/IEEE does not disclose associating the specific content with one or more times of one or more transmitted data portions.

Yao discloses associating the specific content with one or more times of one or more transmitted data portions (col. 7, lines 33-65; Fig. 5, element S26; Fig. 6). *It should be noted that the "transfer start timings" are equivalent to the "one or more times".*

The combination of Jaeger/IEEE and Yao are analogous art because they are from the same field of endeavor, that being data streaming systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Yao's schedule within Jaeger/IEEE's recording/playback

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system. The motivation for doing so would have been to provide a real time stream server and a method for operating a real time stream server, capable of realizing a supply of a plurality of real time stream data with different data rates by a scheduling scheme using constant time-slot interval and transfer start timing period, without wasting a transfer capacity of disk devices (Yao, col. 2, lines 40-46).

As per claim 2, the combination of Jaeger/IEEE/Yao discloses said receiving a request for at least one specific content further comprises:

receiving a request for at least a portion of recorded video (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 3, the combination of Jaeger/IEEE/Yao discloses said receiving a request for at least one specific content further comprises:

receiving a request for at least a portion of recorded audio (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 4, the combination of Jaeger/IEEE/Yao discloses said receiving a request for at least one specific content further comprises:

receiving a request for at least a portion of recorded video and recorded audio (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 5, the combination of Jaeger/IEEE/Yao discloses said receiving a request for at least one specific content further comprises:

receiving a request for at least a portion of at least one of computer processable and network processable data (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)"). *It should be noted that audio, video, and data tracks are all both computer processable data as well as network processable data.*

As per claim 6, the combination of Jaeger/IEEE/Yao discloses obtaining one or more temporal addresses corresponding to the at least one specific content by associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content further comprises:

consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions (Yao, col. 7, lines 55-65, Fig. 5, element 26; Fig. 6).

As per claim 12, the combination of Jaeger/IEEE/Yao discloses said consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

associating the specific content with at least one absolute time associated with a clock (Yao, Fig. 6). *It should be noted that "2400 ms" is an absolute time. It should also be noted that it is required the "2400 ms" be associated with a clock.*

As per claim 13, the combination of Jaeger/IEEE/Yao discloses said associating the specific content with at least one absolute time associated with a clock further comprises:

associating the specific content with at least one time associated with at least one of an atomic clock, a global clock, a relative clock, a transmitted clock, and/or a number of ticks relative to some specified received data (Yao, Fig. 6). *See the citation note for claim 12 above.*

As per claim 14, the combination of Jaeger/IEEE/Yao discloses said associating the specific content with at least one absolute time associated with a clock further comprises:

associating the specific content with at least one absolute time associated with a transmitted clock (Yao, Fig. 6). *See the citation note for claim 12 above.*

As per claim 15, the combination of Jaeger/IEEE/Yao discloses said consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

associating the specific content with at least one relative time (Yao, Fig. 6). *It should be noted that "2400 ms" is also a relative time.*

As per claim 16, the combination of Jaeger/IEEE/Yao discloses said associating the specific content with at least one relative time further comprises:

associating the specific content with at least one time relative to a received marker (Yao, Fig. 6). *It should be noted that the end of a "2400 ms segment" is equivalent to the "received marker."*

As per claim 17, the combination of Jaeger/IEEE/Yao discloses said associating the specific content with at least one relative time further comprises:

associating the specific content with at least one time of a first and/or second received marker (Yao, Fig. 6). *It should be noted that the beginning of a "2400 ms segment" is equivalent to the "first received marker" and the end of a "2400 ms segment" is equivalent to the "second received marker."*

As per claim 18, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting at least a portion of cyclically transmitted data in response to the one or more temporal addresses (Jaeger, col. 6, lines 49-63, Fig. 2). *It should be noted that*

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the re-ordered audio/video/data tracks/signals are recorded tracks from a disk drive and therefore must be cyclically transmitted data.

As per claim 19, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from a first network and a second network in response to the one or more temporal addresses (Yao, col. 8, lines 65-67, Fig. 6). *It should be noted that “disk-0” is a “first network” and “disk-1” is a “second network.” It should also be noted that the “transfer start timings” are equivalent to “temporal addresses.”*

As per claim 20, the combination of Jaeger/IEEE/Yao discloses constructing the specific content from data selected from a first network and a second network in response to the one or more temporal addresses (Yao, col. 8, lines 65-67, col. 9, lines 30-32, Fig. 6).

As per claim 21, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from at least one data stream having file-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 22, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from at least one data stream having disk-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 23, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from at least one data stream having tape-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 24, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from at least one data stream having substantially static-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 25, the combination of Jaeger/IEEE/Yao discloses said selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

selecting data from at least one data stream having object-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 26, Jaeger discloses a system comprising:

means for obtaining one or more temporal addresses corresponding to the at least one specific content (col. 5, lines 52-63; Fig. 1); *See the citation note for the similar limitation in claim 1 above.*

and means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses (col. 6, lines 49-63; Fig. 2). *See the citation note for the similar limitation in claim 1 above.*

Jaeger does not explicitly disclose means for receiving a request for at least one specific content.

IEEE discloses disk read I/O transactions are composed of transaction initiations (i.e. requests) (pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

At the time of the invention it would have been obvious to a person of ordinary skill in the art to have the record/playback apparatus receive a playback request so that the incremental temporal segments of each recorded track are read from the disk in response to the playback request. The motivation for doing so would have been to prevent playback at times when the disk drive and/or RAM buffer are not ready to handle the reading and/or writing of data frames.

The combination of Jaeger/IEEE does not disclose associating the specific content with one or more times of one or more transmitted data portions.

Yao discloses associating the specific content with one or more times of one or more transmitted data portions (col. 7, lines 33-65; Fig. 5, element S26). *It should be noted that the "transfer start timings" are equivalent to the "one or more times".*

The combination of Jaeger/IEEE and Yao are analogous art because they are from the same field of endeavor, that being data streaming systems.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to implement Yao's schedule within Jaeger/IEEE's recording/playback system. The motivation for doing so would have been to provide a real time stream server and a method for operating a real time stream server, capable of realizing a supply of a plurality of real time stream data with different data rates by a scheduling scheme using constant time-slot interval and transfer start timing period, without wasting a transfer capacity of disk devices (Yao, col. 2, lines 40-46).

As per claim 27, the combination of Jaeger/IEEE/Yao discloses said means for receiving a request for at least one specific content further comprises:

means for receiving a request for at least a portion of recorded video (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 28, the combination of Jaeger/IEEE/Yao discloses said means for receiving a request for at least one specific content further comprises:

means for receiving a request for at least a portion of recorded audio (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 29, the combination of Jaeger/IEEE/Yao discloses said means for receiving a request for at least one specific content further comprises:

means for receiving a request for at least a portion of recorded video and recorded audio (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)").

As per claim 30, the combination of Jaeger/IEEE/Yao discloses said means for receiving a request for at least one specific content further comprises:

means for receiving a request for at least a portion of at least one of computer processable and network processable data (Jaeger, col. 8, lines 36-46, Fig. 5; IEEE, pg. 590, "I/O transaction" and pg. 1198, "transaction initiation (request)"). *See the citation note for claim 5 above.*

As per claim 31, the combination of Jaeger/IEEE/Yao discloses means for obtaining one or more temporal addresses corresponding to the at least one specific content by associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content further comprises:

means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions (Yao, col. 7, lines 55-65, Fig. 5, element 26). *See the citation note for claim 6 above.*

As per claim 37, the combination of Jaeger/IEEE/Yao discloses said means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

means for associating the specific content with at least one absolute time associated with a clock (Yao; Fig. 6). *See the citation note for claim 12 above.*

As per claim 38, the combination of Jaeger/IEEE/Yao discloses said means for associating the specific content with at least one absolute time associated with a clock further comprises:

means for associating the specific content with at least one time associated with at least one of an atomic clock, a global clock, a relative clock, a transmitted clock, and/or a number of ticks relative to some specified received data (Yao; Fig. 6). *See the citation note for claim 12 above.*

As per claim 39, the combination of Jaeger/IEEE/Yao discloses said means for associating the specific content with at least one absolute time associated with a clock further comprises:

means for associating the specific content with at least one absolute time associated with a transmitted clock (Yao; Fig. 6). *See the citation note for claim 12 above.*

As per claim 40, the combination of Jaeger/IEEE/Yao discloses said means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

means for associating the specific content with at least one relative time (Yao; Fig. 6). *See the citation note for claim 15 above.*

As per claim 41, the combination of Jaeger/IEEE/Yao discloses said means for associating the specific content with at least one relative time further comprises:

means for associating the specific content with at least one time relative to a received marker (Yao; Fig. 6). *See the citation note for claim 16 above.*

As per claim 42, the combination of Jaeger/IEEE/Yao discloses said means for associating the specific content with at least one relative time further comprises:

means for associating the specific content with at least one time of a first and/or second received marker (Yao; Fig. 6). *See the citation note for claim 17 above.*

As per claim 43, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting at least a portion of cyclically transmitted data in response to the one or more temporal addresses (Jaeger, col. 6, lines 49-63, Fig. 2). *See the citation note for claim 18 above.*

As per claim 44, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from a first network and/or a second network in response to the one or more temporal addresses (Yao, col. 8, lines 65-67, Fig. 6). *See the citation note for claim 19 above.*

As per claim 45, the combination of Jaeger/IEEE/Yao discloses means for constructing the specific content from data selected from a first network and/or a second network in response to the one or more temporal addresses (Yao, col. 8, lines 65-67, col. 9, lines 30-32, Fig. 6).

As per claim 46, the combination of Jaeger/IEEE discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from at least one data stream having file-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 47, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from at least one data stream having disk-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 48, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from at least one data stream having tape-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 49, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from at least one data stream having substantially static-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

As per claim 50, the combination of Jaeger/IEEE/Yao discloses said means for selecting data from at least one data stream having spatial-to-temporal translated data, in response to the one or more temporal addresses further comprises:

means for selecting data from at least one data stream having object-address-to-temporal-address translated data (Jaeger, col. 5, lines 12-20, col. 6, lines 49-63, Fig. 2).

Claims 7-11 and 32-36 are rejected under 35 U.S.C. 103(a) as being obvious over Jaeger in view of IEEE and Yao as applied to claims 1, 6, 26, and 31 above, and further in view of Ma et al. (U.S. Patent 5,926,649) (hereinafter “Ma”).

As per claim 7, the combination of Jaeger/IEEE/Yao discloses all the limitations of claim 7 except said consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *It should be noted that “disk-based storage system 14” is equivalent to the “hardware spatial data storage system”. It should also be noted that the schedules in Fig. 5 are defined in response to the location of data in the disk-based storage system. The location of data in the disk-*

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based storage system dictates the order of data in the disk-based storage system.

Therefore, it follows that the schedules in Fig. 5 are also defined in response to the order of the data in the disk-based storage system.

The combination of Jaeger/IEEE/Yao and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Jaeger/IEEE/Yao's schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

As per claim 8, the combination of Jaeger/IEEE/Yao/Ma discloses said consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

consulting a schedule published by at least one of a source controller and/or a source switch controller (Yao, col. 5, lines 28-29, col. 7, lines 55-65, Fig. 3, element 2, Fig. 5, element 26). *It should be noted that the "control device" is equivalent to the "source controller."*

As per claim 9, the combination of Jaeger/IEEE/Yao/Ma discloses said consulting a schedule published by at least one of a source controller and/or a source switch controller further comprises:

accepting input of the schedule published by at least one of the source controller and the source switch controller (Yao, col. 7, lines 55-65, Fig. 3, Fig. 5, element 26).

As per claim 10, the combination of Jaeger/IEEE/Yao/Ma discloses said consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

consulting a schedule received from at least one of a source controller and/or a source switch controller (Yao, col. 7, lines 55-65, Fig. 5, element 26).

As per claim 11, the combination of Jaeger/IEEE/Yao/Ma discloses said consulting a schedule received from at least one of a source controller and/or a source switch controller further comprises:

receiving the schedule from a data stream (Yao, col. 7, lines 55-65, Fig. 3, Fig. 5, element 26).

As per claim 32, the combination of Jaeger/IEEE/Yao discloses all the limitations of claim 32 except said means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

means for the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system.

Ma discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system (col. 9, lines 10-22; col. 10, lines 43-60; Figs. 4 and 5). *See the citation for claim 7 above.*

The combination of Jaeger/IEEE/Yao and Ma are analogous art because they are from the same field of endeavor, that being data transmission.

At the time of the invention it would have been obvious to a person of ordinary skill in the art to apply Ma's scheduling technique to Jaeger/IEEE/Yao's schedule. The motivation for doing so would have been to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients.

As per claim 33, the combination of Jaeger/IEEE/Yao/Ma discloses said means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

means for consulting a schedule published by at least one of a source controller and/or a source switch controller (Yao, col. 5, lines 28-29, col. 7, lines 55-65, Fig. 3, element 2, Fig. 5, element 26). *See the citation note for claim 8 above.*

As per claim 34, the combination of Jaeger/IEEE/Yao/Ma discloses said means for consulting a schedule published by at least one of a source controller and/or a source switch controller further comprises:

means for accepting input of the schedule published by at least one of the source controller and the source switch controller (Yao, col. 7, lines 55-65, Fig. 3, Fig. 5, element 26).

As per claim 35, the combination of Jaeger/IEEE/Yao/Ma discloses said means for consulting a schedule having the specific content in association with the one or more times of the one or more transmitted data portions further comprises:

means for consulting a schedule received from at least one of a source controller and/or a source switch controller (Yao, col. 7, lines 55-65, Fig. 5, element 26).

As per claim 36, the combination of Jaeger/IEEE/Yao/Ma discloses said means for consulting a schedule received from at least one of a source controller and/or a source switch controller further comprises:

means for receiving the schedule from a data stream (Yao, col. 7, lines 55-65, Fig. 3, Fig. 5, element 26).

(10) Response to Argument

Response to B.1.a.1.

Appellant argues, in section B.1.a.1., that:

“Applicant respectfully points out that Applicant has reviewed the portions of the Cited References (Jaeger, IEEE, Yao) identified by the Examiner, and so far as

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Applicant can discern, the Cited References do not recite "obtaining one or more temporal addresses corresponding to the at least one specific content *by associating the specific content with one or more times of one or more transmitted data portions*, in response to the request for the at least one specific content" as recited in clause [b] of Independent Claim 1." (original emphasis)

The Examiner respectfully disagrees. In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

First, when looking at the Jaeger reference, the Examiner submits that Jaeger's "audio tracks/frames" are equivalent to Appellant's "specific content". The Examiner also submits that Jaeger's "time stamps" are equivalent to Appellant's "temporal addresses". Support for this equivalency can be found at page 10, lines 5-7 of Appellant's specification which state:

"In other alternate implementations, the time stamps of various packets of data can be used to provide temporal addressing..." (emphasis added)

In Jaeger the time stamps correspond to the audio tracks/frames (see col. 5, lines 49-63). Thus, Jaeger sufficiently discloses obtaining one or more temporal addresses corresponding to the at least one specific content, as simply and broadly claimed by Appellant.

Next, when looking at the Yao reference, the Examiner submits that Yao's "unit streams" are equivalent to Appellant's "specific content" and Yao's "transfer starting

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times” are equivalent to Appellant’s “one or more times of one or more transmitted data portions”. In Yao, a request is received for the real time stream data (i.e. unit streams) (see col. 7, lines 21-22 and Fig. 5, element S21). In response to this request, each unit stream is associated with a transfer starting time (see col. 7, lines 33-65 and Fig. 5, element S26). Fig. 6 of Yao shows how each unit stream 0 through 8 is associated with a transfer starting time. Thus, Yao sufficiently discloses associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content, as simply and broadly claimed by Appellant.

Therefore, when combining Jaeger, IEEE, and Yao in the manner set forth by the Examiner in the rejection of claim 1 above, the combination of Jaeger/IEEE/Yao discloses clause [b] (“obtaining one or more temporal addresses corresponding to the at least one specific content by associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content”) of claim 1. Accordingly, based on the foregoing, the combination of Jaeger/IEEE/Yao renders claim 1 unpatentable.

Response to B.1.a.2.

Appellant argues, in section B.1.a.2., that:

“Examiner Interpretation Appears to be Based on Inadvertent Impermissible Hindsight, Personal Knowledge, or Official Notice; Applicant Requests Issuance of Notice of Allowability”

The Examiner respectfully disagrees. The Examiner notes that Appellant's argument in section B.1.a.2. is based on the allegation that the combination of Jaeger/IEEE/Yao does not disclose clause [b] of independent claim 1, however, the Examiner refers Appellant above to the response to B.1.a.1 which details how the combination of Jaeger/IEEE/Yao does in fact disclose clause [b] of independent claim 1. Accordingly, the combination of Jaeger/IEEE/Yao renders claim 1 unpatentable.

Response to B.2.

Appellant argues, in section B.2., that:

"...Dependent Claims 2-25 are patentable for at least the reasons why Independent Claim 1 is patentable."

The Examiner respectfully disagrees and refers Appellant above to the responses to B.1.a.1. and B.1.a.2. which detail how the combination of Jaeger/IEEE/Yao renders claim 1 unpatentable.

Response to B.3.

Appellant argues, in section B.3., that:

"Dependent Claim 7 is Independently Patentable"

The Examiner respectfully disagrees. When looking at the Ma reference, Fig. 5 shows the schedule of data transmission from the disk storage subsystem. Ma breaks each disk into zones for the purposes of data storage and then eventual data retrieval (see Abstract). As can be seen from Fig. 5 of Ma, during each time interval T each

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group within each scheduler R accesses a different zone within a disk for retrieval and transmission of data. This is done to provide sequential-like parallel retrieval suitable for supporting real-time multimedia data distribution for large numbers of clients. The data retrieved and transmitted by a given group in a given scheduler R during a given time interval T is based on the disk zones because if the wrong zone were to be accessed during a certain time interval the stream of data being transmitted would be incorrect. For example, during time interval T_0 , group 5 of scheduler R_1 must access disk 1, zone 2 in order for the real-time data stream to be correct. Thus, in Ma the schedule of data transmission is defined in response to the disk zones. The disk zones in turn reflect an order in which the data (i.e. content) is spatially resident upon the disk. Therefore, Ma sufficiently discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, as simply and broadly claimed by Appellant. Accordingly, based on the foregoing, the combination of Jaeger/IEEE/Yao/Ma renders claim 7 unpatentable.

Response to C.1.1.

Appellant argues, in section C.1.1., that:

“Applicant respectfully points out that Applicant has reviewed the portions of the Cited References (Jaeger, IEEE, Yao) identified by the Examiner, and so far as Applicant can discern, the Cited References do not recite “means for obtaining one or more temporal addresses corresponding to the at least one specific content *by*

associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content" as recited in clause [b] of Independent Claim 26." (original emphasis)

The Examiner respectfully disagrees. In response to Appellant's arguments against the references individually, one cannot show nonobviousness by attacking references individually where the rejections are based on combinations of references. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981); *In re Merck & Co.*, 800 F.2d 1091, 231 USPQ 375 (Fed. Cir. 1986).

First, when looking at the Jaeger reference, the Examiner submits that Jaeger's "audio tracks/frames" are equivalent to Appellant's "specific content". The Examiner also submits that Jaeger's "time stamps" are equivalent to Appellant's "temporal addresses". Support for this equivalency can be found at page 10, lines 5-7 of Appellant's specification which state:

"In other alternate implementations, the time stamps of various packets of data can be used to provide temporal addressing..." (emphasis added)

In Jaeger the time stamps correspond to the audio tracks/frames (see col. 5, lines 49-63). Thus, Jaeger sufficiently discloses obtaining one or more temporal addresses corresponding to the at least one specific content, as simply and broadly claimed by Appellant.

Next, when looking at the Yao reference, the Examiner submits that Yao's "unit streams" are equivalent to Appellant's "specific content" and Yao's "transfer starting times" are equivalent to Appellant's "one or more times of one or more transmitted data portions". In Yao, a request is received for the real time stream data (i.e. unit streams)

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(see col. 7, lines 21-22 and Fig. 5, element S21). In response to this request, each unit stream is associated with a transfer starting time (see col. 7, lines 33-65 and Fig. 5, element S26). Fig. 6 of Yao shows how each unit stream 0 through 8 is associated with a transfer starting time. Thus, Yao sufficiently discloses associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content, as simply and broadly claimed by Appellant.

Therefore, when combining Jaeger, IEEE, and Yao in the manner set forth by the Examiner in the rejection of claim 26 above, the combination of Jaeger/IEEE/Yao discloses clause [b] ("means for obtaining one or more temporal addresses corresponding to the at least one specific content by associating the specific content with one or more times of one or more transmitted data portions, in response to the request for the at least one specific content") of claim 26. Accordingly, based on the foregoing, the combination of Jaeger/IEEE/Yao renders claim 26 unpatentable.

Response to C.1.2.

Appellant argues, in section C.1.2., that:

"Examiner Interpretation Appears to be Based on Inadvertent Impermissible Hindsight, Personal Knowledge, or Official Notice; Applicant Requests Issuance of Notice of Allowability"

The Examiner respectfully disagrees. The Examiner notes that Appellant's argument in section C.1.2. is based on the allegation that the combination of

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Jaeger/IEEE/Yao does not disclose clause [b] of independent claim 26, however, the Examiner refers Appellant above to the response to C.1.1. which details how the combination of Jaeger/IEEE/Yao does in fact disclose clause [b] of independent claim 26. Accordingly, the combination of Jaeger/IEEE/Yao renders claim 26 unpatentable.

Response to C.2.

Appellant argues, in section C.2., that:

“...Dependent Claims 27-50 are patentable for at least the reasons why Independent Claim 26 is patentable.”

The Examiner respectfully disagrees and refers Appellant above to the responses to C.1.1. and C.1.2. which detail how the combination of Jaeger/IEEE/Yao renders claim 26 unpatentable.

Response to C.3.

Appellant argues, in section C.3., that:

“Dependent Claim 32 is Independently Patentable”

The Examiner respectfully disagrees. When looking at the Ma reference, Fig. 5 shows the schedule of data transmission from the disk storage subsystem. Ma breaks each disk into zones for the purposes of data storage and then eventual data retrieval (see Abstract). As can be seen from Fig. 5 of Ma, during each time interval T each group within each scheduler R accesses a different zone within a disk for retrieval and transmission of data. This is done to provide sequential-like parallel retrieval suitable

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for supporting real-time multimedia data distribution for large numbers of clients. The data retrieved and transmitted by a given group in a given scheduler R during a given time interval T is based on the disk zones because if the wrong zone were to be accessed during a certain time interval the stream of data being transmitted would be incorrect. For example, during time interval T_0 , group 5 of scheduler R_1 must access disk 1, zone 2 in order for the real-time data stream to be correct. Thus, in Ma the schedule of data transmission is defined in response to the disk zones. The disk zones in turn reflect an order in which the data (i.e. content) is spatially resident upon the disk. Therefore, Ma sufficiently discloses the schedule being defined in response to an order in which the at least one content is spatially resident upon at least one hardware spatial data storage system, as simply and broadly claimed by Appellant. Accordingly, based on the foregoing, the combination of Jaeger/IEEE/Yao/Ma renders claim 32 unpatentable.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

/Arpan P. Savla/

Examiner, Art Unit 2185

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